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| JENNISON, BRIAN W | | | | |
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/588,402

Applicant(s)

FLATTINGER ET AL.

Examiner

BRIAN JENNISON

Art Unit

3742

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 January 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 51-100 is/are pending in the application.
- 4a) Of the above claim(s) 90-100 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 51-89 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 03 August 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/S508)
- Paper No(s)/Mail Date 8/3/2006.

- 4) ☐ Interview Summary (PTO-413)
- Paper No(s)/Mail Date _____.
- 5) ☐ Notice of Informal Patent Application.
- 6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

1. Applicant's election with traverse of Group I, Claims 51-89 in the reply filed on 1/28/2009 is acknowledged. The traversal is on the ground(s) that Group I and Group II are directed to a wire feed unit concerning the drive unit and Groups I and II would not constitute an unreasonable search. This is not found persuasive because Claim 51 does not specify a wire feed unit furthermore, Claim 89 does not contain all the features of claim 51, the special technical features of the bearings, stator housing and rotor which are known in the art from (US 3,414,197) are not claimed in claim 89 of Group II. Arguing both groups do not constitute an unreasonable search is not sufficient to overcome a restriction requirement.

The requirement is still deemed proper and is therefore made FINAL.

2. Claims 90-100 withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected invention or Group II, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in the reply filed on 1/28/2009.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 64, 67, 71, 74, 78, 79, 81-84, 86 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
5. Claim 64 recites the limitation "the gear, the intermediate piece, the insulation plate" in lines 2-5 of the claim. There is insufficient antecedent basis for this limitation in the claim.
6. Claim 67 recites the limitation "the burner housing" in line 2. There is insufficient antecedent basis for this limitation in the claim.
7. Claim 78 recites the limitation "the base body" in line 3. There is insufficient antecedent basis for this limitation in the claim.
8. Claim 79 recites the limitation "the motor shaft, the rotor pack" in lines 3-5. There is insufficient antecedent basis for this limitation in the claim.
9. Claim 81 recites the limitation "the transmission" in line 3. There is insufficient antecedent basis for this limitation in the claim.
10. Claim 82 recites the limitation "the electrically conductive parts" in line 3. There is insufficient antecedent basis for this limitation in the claim.
11. Claim 83 recites the limitation "the torch retainer" in lines 3 and 4. There is insufficient antecedent basis for this limitation in the claim.
12. Claim 84 recites the limitation "the stator winding, the stator magnets, the rotor magnets" in lines 2-4. There is insufficient antecedent basis for this limitation in the claim.

13. Claim 86 recites the limitation "the individual parts, the recognition, the characteristics" in lines 2 and 3. There is insufficient antecedent basis for this limitation in the claim.

14. A broad range or limitation together with a narrow range or limitation that falls within the broad range or limitation (in the same claim) is considered indefinite, since the resulting claim does not clearly set forth the metes and bounds of the patent protection desired. See MPEP § 2173.05(c). Note the explanation given by the Board of Patent Appeals and Interferences in *Ex parte Wu*, 10 USPQ2d 2031, 2033 (Bd. Pat. App. & Inter. 1989), as to where broad language is followed by "such as" and then narrow language. The Board stated that this can render a claim indefinite by raising a question or doubt as to whether the feature introduced by such language is (a) merely exemplary of the remainder of the claim, and therefore not required, or (b) a required feature of the claims. Note also, for example, the decisions of *Ex parte Steigewald*, 131 USPQ 74 (Bd. App. 1961); *Ex parte Hall*, 83 USPQ 38 (Bd. App. 1948); and *Ex parte Hasche*, 86 USPQ 481 (Bd. App. 1949). In the present instance, claim 71 recites the broad recitation control electronics for the drive motor is arranged externally, and the claim also recites in the welding apparatus of in a wire feed device which is the narrower statement of the range/limitation.

15. In the present instance, claim 82 recites the broad recitation "or a part of it", and the claim also recites "the electrically conductive parts" which is the narrower statement of the range/limitation.

16. In the present instance, claim 84 recites the broad recitation "are expandable by additional modules to adjust", and the claim also recites "the output and response behavior of the drive motor" which is the narrower statement of the range/limitation.

17. Regarding claim 74, the phrase "required parts" renders the claim indefinite because it is unclear whether the limitations following the phrase are part of the claimed invention. See MPEP § 2173.05(d). Claim 74 is written in alternative form, if the case of "required parts" is considered the claim is rendered indefinite since, the claims does not set forth what the required parts are.

Claim Rejections - 35 USC § 102

18. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

19. Claims 51-58, 60-63, 65, 67-68, 70-79, 80-84, 87-89 are rejected under 35 U.S.C. 102(b) as being anticipated by Kensrue (US 4,954,690) as cited by applicant.

Kensrue teaches:

Regarding Claim 51: A welding torch including a torch housing, wherein a drive unit formed by at least one drive roller and one pressure roller (**Fig 1 shows a casing or**

torch housing 20 with a drive roller 54 and a roller 52 for providing pressure.) as well as a drive motor is arranged in the torch housing for feeding a welding wire, **(Fig 5 shows a drive motor 16 inside the casing 20 for feeding welding wire 40a)** wherein a part of the torch housing is designed as a stator housing of the drive motor of the drive unit, **(Fig 5 shows part of the housing being a stator housing of the drive unit with the stator being inside of the motor 16.)** and bearings are provided on the torch housing to stabilize and position a rotor of the drive motor. **(The motor 16 would contain bearings and a rotating device since it is an electric motor.)**

Regarding Claim 52: Fig 4 shows the casing 20 or torch housing being comprised of several parts.

Regarding Claim 53: Fig 1 shows the casing 20 to have a base behind 124 and a rectangular cover part on top of casing 20. Fig 1 also shows an extension part at the bottom of the handle of casing 20.

Regarding Claim 54. Fig 4 shows the base part of casing 20 directly below the rectangular opening to contain a free space for parts of the motor 16 and is capable of having other elements attached.

Regarding Claims 55-57: Motor 16 contains a stator winding and magnets and bearings on top of motor 16 which is enclosed in casing 20. These elements are common in electric motors.

Regarding Claim 58: Motor 16 has an intermediate piece at its top which would contain bearings and is attached to the casing 20.

Regarding Claim 60: Fig 4 shows the motor 16 to have a motor shaft 56 which would also contain a winding and magnet inside motor 16 since it is an electric motor which rotates.

Regarding Claims 61 and 79: Fig 4 shows block 12 which acts as an insulation plate and is attached to the intermediate piece on top of motor 16 and the drive roller.

Regarding Claim 62: Drive roller 54 is attached to the drive shaft 56 of motor 16. **See Column 4, Lines 15-18.**

Regarding Claim 63: Fig 2 shows a gear around drive roller 54 which is connected to motor shaft 56.

Regarding Claim 65: The casing is made of plastic which enables cooling of its parts. **See Column 5, Lines 9-12.**

Regarding Claims 67-68: Fig 1 shows a welding torch for manual welding with a grip forming a T shape above 110 and 108 with the drive motor installed in the region of the grip as shown in Fig 4. The grip also contains ribs around it which can function as a cooling mechanism.

Regarding Claims 70-72: Fig 4 shows a micro switch 64 which is an electronic device for controlling the motor and is arranged externally to the motor but integrated in the casing 20. **See Column 4, Lines 25-36.**

Regarding Claim 73: The casing is made of plastic. **See Column 5, Lines 9-12.**

Regarding Claim 74: Block 12 functions as a mounting plate which has guide elements mounted to it. **See Fig 4.**

Regarding Claim 75: The motor 16 is a variable speed control torque motor which is a type of synchro or servo motor. **See Column 1, Lines 45-50.**

Regarding Claims 76-77: The motor may be a DC motor and is a step motor since it is capable of variable speeds.

Regarding Claim 78: Fig 4 shows the block 12 arranged between the drive roller 54 and the base body around the motor 16 which acts as insulation.

Regarding Claim 81: The block 12 conducts the current. **See Column 4, Lines 52-54.**

Regarding Claim 82: The casing 20 has a plastic non conductive coating. **See Column 5, Lines 9-12.**

Regarding Claim 83: The torch retainer which is part of the casing is made of plastic which is a non conductive material. **See Column 5, Lines 9-12.**

Regarding Claim 84: The drive motor 16 is capable of having additional modules to adjust the output and response behavior.

Regarding Claim 88: A spring controls the pressure of the drive roller and is attached to the block 12.

Regarding Claim 89: Fig 1 shows the casing 20 being divided along an axis.

Regarding Claim 80:

Kensrue discloses the claimed invention except for the drive roller being made out of an electrically non-conductive material. It would have been obvious to one having ordinary

skill in the art at the time the invention was made to make the drive roller out of an electrically non-conductive material, since it has been held to be within the general skill the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice.

Regarding Claim 87:

Kensrue discloses the claimed invention except several drive motors. It would have been obvious to one having ordinary skill in the art at the time the invention was made to include several drive motors since it has been held that mere duplication of the essential working parts of a device involves only routine skill in the art. (St. Regis Paper Co. v. Bemis Co., 193 USPQ 8.)

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. **Claims 59, 64 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kensrue in view of Fox, (US 4,937,417).**

The teachings of Kensrue have been discussed above.

Kensrue also teaches:

Regarding Claim 64: Fig 2 shows roller 54 having a gear around its outside being fastened to the block 12 or intermediate piece.

Kensrue fails to teach:

Regarding Claim 59: A welding torch wherein one bearing is fixedly connected with the torch housing and a further bearing is detachably fastened thereto.

Fox teaches:

Regarding Claim 59: Fig 6 shows bearings 122 and 124 being attached to the housing and are capable of being detached.

In view of the teachings of Fox, it would have been obvious to one of ordinary skill in the art at the time of the invention to include with the teachings of Kensrue, the bearings connected to the housing since Fox teaches the bearings connected to the housing to allow the drive shaft to rotate.

4. Claim 66 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kensrue in view of Hudson et al (US 2,808,498).

The teachings of Kensrue have been discussed above.

Kensrue fails to teach:

Regarding Claim 66: A welding torch wherein, in the region of the drive motor, cooling channels and/or cooling ducts are arranged in the torch housing.

Hudson teaches:

Regarding Claim 66: Fig 1 shows a water pipe 34 inside water jacket 28 which is in the torch housing.

In view of Hudson et al's teachings it would have been obvious to one of ordinary skill in the art at the time of the invention to include with the teachings of Kensrue, the cooling channel in the torch housing since Hudson teaches the water jacket and water pipe for cooling the welding torch.

5. Claims 69 and 86 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kensrue in view of Huismann et al (US 2004/0016788).

The teachings of Kensrue have been discussed above.

Kensrue fails to teach:

Regarding Claim 69: A welding torch, wherein the motor shaft is arranged axially to the welding wire, and the welding wire extends through the hollowly designed motor shaft.

Regarding Claim 86: A welding torch, wherein the individual parts of the drive motor comprise a memory module for the recognition of the characteristics of the drive motor.

Huisman teaches:

Regarding Claim 69: The motor shaft 401 is arranged axially to the welding wire 209 and the wire passes through the shaft. **See Paragraph [0048].**

Regarding Claim 86: Sensors monitor feedback input and are capable of storing information about the motor. **See Paragraph [0049].**

In view of Huisman et al's teachings, it would have been obvious to one of ordinary skill in the art at the time of the invention to include with the teachings of Kensrue, the shaft arranged axially to the wire with the wire passing through it and the memory since, Huisman teaches the hollow motor shaft arranged axially to the wire with welding wire passing through it for increasing the length of the wire path between the tip and the wire source and the sensors for monitoring the motor characteristics and controlling the process.

6. Claim 85 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kensrue in view of applicant admitted prior art.

The teachings of Kensrue have been discussed above.

Kensrue fails to teach:

Regarding Claim 85: A welding torch, wherein an encoder is connected with the rotor or the drive roller.

Applicant admits:

Regarding Claim 85: any encoder is known from the prior art. **See Page 16, Line 8 of the spec.**

In view of Applicant's admitted prior art, it would have been obvious to one of ordinary skill in the art at the time of the invention to include with the teachings of Kensrue the encoder since the applicant admits an encoder may be connected to the drive roller for converting the angular position of the shaft to an analog or digital signal.

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Altekruse (US 6,225,599) teaches a welding torch with a housing, motor, and drive wheel.

Kensrue (US 6,064,036) teaches a welding torch with housing, motor, handle, drive roller, and wire spool.

David (US 5,595,671) teaches a welding torch with wire feeder unit and torch housing.

Geus (US 5,326,958) teaches a welding torch with motor and roller.

Centner (US 2004/0020911) teaches a welding torch with cooling ribs.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to BRIAN JENNISON whose telephone number is (571)270-5930. The examiner can normally be reached on M-Th 7:00AM-5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tu Hoang can be reached on 571-272-4780. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/BRIAN JENNISON/
Examiner, Art Unit 3742

3/2/2009
/TU B HOANG/
Supervisory Patent Examiner, Art Unit 3742